

AMENDMENT UNDER 37 C.F.R. § 1.111

U.S. Application No. 10/024,567

Attorney Docket A8224

Amended  
embodiment the notch provides only fine adjustment of the capacitive effect of the cross-coupling bar 124. Therefore, the height of the notch is only between twenty and fifty percent of the height of the wall 123. Again, however, it should be understood that the invention is not limited to any particular height.”

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**IN THE CLAIMS:**

**The claims are amended as follows:**

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Q2  
1. (Amended) A cavity filter comprising:  
a filter housing, said housing having at least first and second cavities separated by a cavity wall, said cavity wall running the entire length of the first and second cavities;  
a filter cover for covering said filter housing; and  
a plurality of resonators respectively disposed in said cavities,  
wherein first and second resonators, of said plurality of resonators, are coupled to each other by both an adjustable inductive coupler and a capacitive cross-coupler.

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Q3  
13. (Amended) A method of tuning the frequency response of the bandwidth of a cavity filter that includes a filter housing, a filter cover for covering said filter housing, a plurality of resonators respectively disposed in cavities, including a first and second resonator respectively disposed in first and second cavities, a cavity wall running the entire length of the first and second cavities and disposed between said first and second resonators, an inductive coupler that includes a tuner, and a capacitive cross-coupler; said method comprising:

*3 Cont*

adjusting the capacitive cross-coupling effect between said first and second resonators by  
adjusting the inductive coupler.

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*Q4*

17. (Amended) A method of tuning the frequency response of the bandwidth of a cavity filter that includes a filter housing with a plurality of resonators disposed in cavities, a first and second of said plurality of resonators separated by a cavity wall running the entire length of the first and second cavities, comprising the step of adjusting the capacitive cross-coupling effect between said resonators by externally adjusting the inductive coupling.

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**Please add the following new claim:**

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*Q5*  
*Ind*

18. (New) A cavity filter comprising:

- a filter housing, said housing having at least first and second cavities separated by a cavity wall;
- a filter cover for covering said filter housing; and
- a plurality of resonators respectively disposed in said cavities, wherein each cavity has only one resonator disposed therein; and
- wherein first and second resonators, of said plurality of resonators, are coupled to each other by both an inductive coupler and a capacitive cross-coupler.

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